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*Indian Standard*  
SPECIFICATION FOR  
*PAUSHTIK WHEAT MAIDA*

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*Indian Standard*  
**SPECIFICATION FOR**  
**PAUSHTIK WHEAT MAIDA**

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# Indian Standard

## SPECIFICATION FOR

### PAUSHTIK WHEAT MAIDA

#### 0. FOREWORD

**0.1** This Indian Standard was adopted by the Indian Standards Institution on 28 May 1984, after the draft finalized by the Nutrition Sectional Committee had been approved by the Agricultural and Food Products Division Council.

**0.2** *Maida* is made by milling or grinding wheat and bolting or dressing the resulting wheat meal. In an effort at nutritional upgrading *paushtik* wheat *maida* to which edible oilseed proteins, vitamins and minerals have been added is at present being prepared and marketed in the country. This standard is expected to help in exercising proper quality control in the manufacture of *paushtik* wheat *maida* of good quality under hygienic conditions.

**0.3** Other Indian Standards brought out on related subjects are on *maida* for general purposes ( IS : 1009-1979\* ), wheat flour for use by bread industry ( IS : 7464-1974† ), wheat flour for use by biscuit industry ( IS : 7463-1974‡ ), and wheat flour for use by cake industry ( IS : 9194-1979§ ), separate standards or fortified and *paushtik* wheat *atta* and barley powder and fortified wheat *maida* are also being brought out simultaneously.

NOTE — The *paushtik* variety contains higher percentage of proteins compared to the fortified variety, percentages of other contents, such as calcium, iron and vitamins remaining the same.

**0.4** While formulating this standard, due consideration has been given to the relevant Rules prescribed by the Government of India, under the *Prevention of Food Adulteration Act, 1954* and the *Standards of Weights and Measures ( Packaged Commodities ) Rules, 1977*. This Standard is, however, subject to the restrictions imposed under these wherever applicable.

**0.5** For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960||. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

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\*Specification for *maida* for general purposes ( second revision ).

†Specification for wheat flour for use in bread industry.

‡Specification for wheat flour for use by biscuit industry.

§Specification for wheat flour for use in cake industry.

||Rules for rounding off numerical values ( revised ).

## 1. SCOPE

**1.1** This standard prescribes the requirements and the methods of sampling and test for *paushtik* wheat *maida* hereafter termed PW *maida*.

## 2. REQUIREMENTS

**2.1** The PW *maida* shall be prepared by thoroughly and uniformly blending suitable proportions of an edible protein source ( up to 10 percent, *also see* Note 1 ) such as edible oilseed proteins, calcium carbonate, iron, thiamine, riboflavin and niacin with a wheat *maida* of good quality ( IS : 1009-1979\* ). It shall be in the form of powder having a characteristic taste and flavour. The product shall be free from rancidity and from insect, rodent or fungus infestation. It shall also be free from fermented, musty or other objectionable odour. It shall not have any ingredients other than those specified nor any extraneous matter.

NOTE 1 — In the prevention of *Food Adultration Rules 1955*, only the addition of groundnut flour is permitted in similar products. Till such time as the addition of other protein rich flours is accepted by the Government of India, the granting of ISI Certification Mark shall be based on the existing requirements given under the provisions of the *Preventions of Food Adultration Rules, 1955* ( *see 0.4* ).

NOTE 2 — The appearance, taste and odour shall be determined by sensory evaluation tests.

**2.2** The edible protein flour(s) used for such blending shall conform to the following specifications:

- a) Groundnut flour — IS : 4684-1975† or IS : 4875-1975‡
- b) Soya flour — IS : 7835-1975§ or IS : 7836-1975|| or IS : 7837-1975¶
- c) Cottonseed flour — IS : 4876-1968\*\*
- d) Sesame flour — IS : 6109-1971†† or IS : 6108-1971‡‡
- e) Coconut flour — IS : 8664-1977§§ or IS : 8676-1977||||

**2.2.1 Aflatoxin** — The PW *maida* shall not have an aflatoxin content of more than 30  $\mu\text{g}/\text{kg}$  of the material, when tested according to the method prescribed in Appendix J of IS : 4684-1975†.

\*Specification for *maida* for general purposes ( *second revision* ).

†Specification for edible groundnut flour ( expeller pressed ) ( *first revision* ).

‡Specification for edible groundnut flour ( solvent extracted ) ( *first revision* ).

§Specification for edible medium-fat soya flour.

||Specification for edible low-fat soya flour.

¶Specification for edible full-fat soya flour.

\*\*Specification for edible cottonseed flour ( solvent extracted ) ( *first revision* ).

††Specification for edible sesame flour ( expeller pressed ).

‡‡Specification for edible sesame flour ( solvent extracted ).

§§Specification for edible coconut flour ( expeller pressed ).

||||Specification for edible coconut flour ( solvent extracted ).

**2.2.2 Urease Activity** — The PW *maida* shall not show a change in *pH* by more than 0.5, when determined by the method given in Appendix D of IS : 7837-1975\*.

**2.2.3 Gossypol** — The PW *maida* shall not have a free gossypol content of more than 0.06 percent by mass and a total gossypol content of more than 1.2 percent of mass, when tested by the methods given in Appendices A and B respectively of IS : 10901-1984†.

**2.3** The calcium carbonate used for blending PW *maida* shall be prepared chalk ( popularly known as *creta preparata* ) or dicalcium phosphate or tricalcium phosphate. The iron or iron salts should be such as to ensure high bio-availability of iron. The vitamins and the minerals shall be of pharmaceutical or food grade.

**2.4 Hygienic Conditions** — The PW *maida* shall be manufactured, packed, stored and distributed under hygienic conditions ( see IS : 2491-1972‡ ) in licensed premises.

**2.5** The products shall also conform to the requirements given in Table 1.

### 3. PACKING AND MARKING

**3.1 Packing** — The packages may preferably be of 100 g, 200 g, 500 g, 1 kg, 2 kg, 5 kg, and thereafter, in multiples of 5 kg, as desired by the purchaser.

**3.1.1** For packages above 65 kg, unless otherwise agreed to between the purchaser and the supplier, the material for packing shall be single sound A-twill or B-twill jute bags or DW-flour bags conforming to IS : 1943-1964§, IS : 2566-1965|| and IS : 3984-1967¶.

**3.1.2** The bags used for smaller packs may be polyethylene bags or polyethylene lined jute bags or any other suitable material as agreed to between the purchaser and the supplier.

**3.1.3** The mouth of the bags shall be either machine stitched or hand stitched. If it is hand stitched, the mouth shall be rolled over and then stitched. The stitches shall be in two cross-rows with at least 14 stitches in each row for jute bags of 65 kg and above.

\*Specification for edible full-fat sova flour.

†Specification for *paushik* wheat *atta*.

‡Code for hygienic conditions for food processing units ( *first revision* ).

§Specification for A-twill jute bags ( *revised* ).

||Specification for B-twill jute bags ( *revised* ).

¶Specification for DW-flour bags.

**TABLE 1 REQUIREMENTS FOR PAUSHTIK WHEAT MAIDA**  
( Clause 2.5 )

SL No.	CHARACTERISTIC	REQUIREMENT	METHOD OF TEST, REF TO INDIAN STANDARDS
(1)	(2)	(3)	(4)
i)	Moisture, percent by mass, <i>Max</i>	13.0	Appendix A of IS : 1009-1979*
ii)	Total ash ( on dry basis ), percent by mass, <i>Max</i>	1.0	Appendix B of IS : 1009-1979*
iii)	Acid insoluble ash ( on dry basis ), percent by mass, <i>Max</i>	0.15 ( <i>see Note 1</i> )	Appendix C of IS : 1009-1979*
iv)	Gluten ( on dry basis ), percent by mass, <i>Min</i>	8.0	Appendix D of IS : 1009-1979*
v)	Total protein ( N × 6.5 ) ( on dry basis ), percent by mass, <i>Min</i>	11.5	IS : 7219-1973†
vi)	Crude fibre ( on dry basis ), percent by mass, <i>Max</i>	0.55 ( <i>see Note 1</i> )	Appendix E of IS : 1155-1968‡
vii)	Alcoholic acidity ( as H <sub>2</sub> SO <sub>4</sub> ) with 90 percent alcohol, percent by mass, <i>Max</i>	0.12	Appendix E of IS : 1009-1979*
viii)	Calcium mg/100 g, <i>Min</i>	120 ( <i>see Notes 1 and 2</i> )	Appendix F of IS : 1656-1969§
ix)	Iron, mg/100 g, <i>Min</i>	5	do
x)	Thiamine ( as hydrochloride ), mg/100 g, <i>Min</i>	0.25	IS : 5398-1969
xi)	Riboflavin, mg/100 g, <i>Min</i>	0.5	IS : 5399-1969¶
xii)	Niacin, mg/100 g, <i>Min</i>	2.5	IS : 5400-1969**

NOTE 1 — These values have been referred to the Central Committee for Food Standards for consideration. Till such time as these values are accepted by the Government of India, the granting of ISI certification mark shall be based on the existing requirements given under the provisions of the *Prevention of Food Adulteration Rules, 1955* ( *see 0.4* ).

NOTE 2 — This is equivalent to 300 mg calcium carbonate.

\*Specification for *maida* for general purposes ( *second revision* ).

†Method for determination of protein in foods and feeds.

‡Specification for wheat *atta* ( *second revision* ).

§Specification for processed cereals weaning foods ( *first revision* ).

||Methods for estimation of thiamine ( vitamin B<sub>1</sub> ) in foodstuffs.

¶Methods for estimation of riboflavin ( vitamin B<sub>2</sub> ) in foodstuffs.

\*\*Methods for estimation of nicotinic acid ( niacin ) in foodstuffs.

**3.2 Marking** — Each bag shall be suitably marked so as to give the following information:

- a) Name of the material;
- b) Name and address of the manufacturer;
- c) Batch and code number;
- d) Net mass; and
- e) Any other details required under the *Standards of Weights and Measures ( Packaged Commodities ) Rules 1977*; and *Prevention of Food Adulteration Act, 1954* and *Rules, 1955*.

**3.2.1** All markings shall be applied on the bags in such a manner that the dye or ink does not penetrate into the material.

**3.2.2** Each container may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution ( Certification Marks ) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions, under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

#### 4. SAMPLING

**4.1** The method of drawing representative samples of the material and the criteria for conformity shall be as prescribed in IS : 5315-1978\*.

#### 5. TESTS

**5.1** Tests shall be carried out as prescribed under clauses **2.1**, **2.2** to **2.2.3** and in the appropriate appendices and standards specified in col 4 of Table 1.

**5.2 Quality of Reagents** — Unless specified otherwise, pure chemicals shall be employed in tests and distilled water ( see IS : 1070-1977† ) shall be used where the use of water as a reagent is intended.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the results of analysis.

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\*Methods of sampling for milled cereals and pulses products (*first revision*).

†Specification for water for general laboratory use (*second revision*).

( Continued from page 2 )

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